

CLAIMS

1. The use of cobalt as a catalyst in the electrolytic synthesis of organozinc compounds, advantageously aryl or vinyl organozinc compounds.
- 5 2. The use as claimed in claim 1, characterized in that the cobalt is present in the electrolyte in oxidation state II.
3. The use as claimed in claims 1 and 2, characterized in that the cobalt is present in a  
10 coordinated form.
4. The use as claimed in claim 3, characterized in that the coordination of the cobalt is performed with a solutant or solvent compound that has a high donor number.
- 15 5. The use as claimed in claim 4, characterized in that the atom responsible for the good donor number is chosen from atoms of the nitrogen column.
6. The use as claimed in claims 3 to 5,  
20 characterized in that the coordination of the cobalt is performed with a specific ligand.
7. The use as claimed in claims 3 to 6, characterized in that said ligand contains functions chosen from pyridine, nitrile, phosphine, stibine and  
25 imine functions.

8. A composition for electrolytic use, characterized in that it comprises a cobalt salt, a zinc salt, a solvent and a cobalt ligand.

9. A process for the electrolytic synthesis of organozinc reagents, advantageously aromatic or vinyl organozinc reagents, characterized in that it consists in subjecting a composition as claimed in claim 8, also comprising an organic halide, to an electrolysis on an inert cathode.

10. An aromatic organozinc compound comprising directly linked to an  $sp^2$  carbon atom, that is advantageously aromatic, at least one function or group chosen from not more than monosubstituted aniline functions, an  $SO_2$  group and another zinc-bearing function.

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